



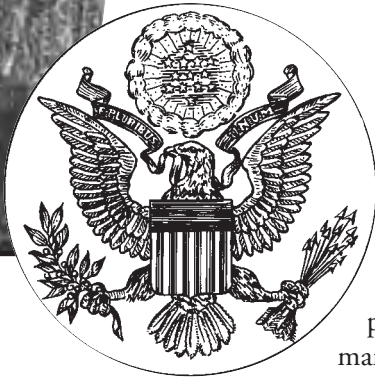
# The Bald Eagle in Missouri

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To the surprise of most people, Missouri is one of the leading bald eagle states. Each fall, thousands of these great birds migrate south from their nesting range in Canada and the Great Lakes States to hunt around the open waters of our rivers and lakes.

Many take up residence wherever they find open water and plentiful food. Missouri, because of its big rivers, many lakes and wetland areas, is especially attractive to these huge, magnificent birds.

More than 2,200 bald eagles are reported in Missouri regularly during winter, making our state the leader in the lower 48 states.



## A National Symbol

Like wolves, lions and other large predators, eagles have captured man's imagination throughout the centuries. It is logical that early settlers in the New World selected the bald eagle, a true American species, as a favorite.

In 1782—the year the bald eagle was formally adopted as our national emblem—bald eagles were probably flourishing, with as many as 20,000 nesting pairs in what is now the United States.

In the 200 years since the bald eagle became our symbol of strength and freedom, its numbers have suffered a great decline. Victims of human encroachment, habitat destruction, environmental contamination and open persecution, by the late 1800s bald eagles were already

restricted to their current breeding stronghold: Alaska, Canada, the Great Lakes States and the Pacific Northwest. At one time, there were only 3,000 nesting pairs in the lower 48 states.

Concerned about their plight, the federal government in 1978 declared the bald eagle an endangered species in 43 states, including Missouri.

Since then, the bald eagle has recovered dramatically from the low numbers of the 1960s and 1970s. Today, there are more than 10,000 nesting pairs in the lower 48 states. In 1995, the bald eagle's status was downgraded from endangered to threatened throughout this range. Although to closely protect Missouri's nesting eagles, bald eagles are still recognized as state endangered.



adult bald eagle

immature  
bald eagle

golden eagle

## Other Eagles

The only other kind of eagle in North America is the golden eagle, a western species that is solid brown in color. It wanders into Missouri in small numbers in the winter and preys primarily on rabbits and rodents.

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Missouri Department of Conservation





## Bald Eagle Facts

**Name:** The term “bald” is a bit confusing. It refers to the old English word “balde” meaning white—rather than without feathers. The scientific name, *Haliaeetus leucocephalus*, means white-headed sea eagle.

**Eyesight:** Eagle vision is five to six times sharper than a human’s. The prominent brow shades the eye for keener vision.

**Beak:** The hooked beak is used for tearing flesh.

**Foods:** Fish compose 60 to 90 percent of the bald eagle diet, and dead or injured wildlife are often eaten in the winter. Eagles usually locate prey by soaring or watching from a high perch. Piracy is another way eagles get food. If one bird makes a prize catch, others will often try to take the food away. Prey animals weight from 3 to 5 pounds, at most. An eagle would have difficulty carrying anything even one-half its own weight, making the myth of eagles carrying off human babies or calves sound absurd.

**Size:** One of the largest birds of prey in the world, bald eagles have a 6 1/2- to 8-foot wingspan and are 3 to 3 1/2 feet tall, weighing 8 to 15 pounds. In many birds of prey, the female is larger than the male. But in bald eagles, size varies so much that it cannot be used to identify males from females.

**Young:** Two and sometimes three white eggs are laid each year in March or April. Both parents incubate the eggs for 34 to 40 days. By 10 to 11 weeks of age, eagles are feathered, nearly full grown and able to fly from the nest.

**Speed:** Eagles fly 20 to 40 miles per hour in normal flight, but can reach speeds of more than 100 miles per hour while diving.

**Talons:** Powerful feet with needle-sharp, 2-inch talons are used to take prey.

**Age:** Bald eagles have lived up to 50 years in captivity. Their life expectancy in the wild may be 30 years.

**Nests:** Nests are usually built in the top of a giant tree. Each year in January and February, the pair adds to the nest, and a bald eagle nest can become the largest of any North American bird—the national record is 20 feet deep and 10 feet wide, weighing 2 tons! But in Missouri, nests are smaller compared to regions with larger trees.

**Mortality rate:** Biologists estimate that there is a 50 percent mortality rate for bald eagles during their first year after leaving the nest, a 10 percent mortality rate the second year and 5 percent per year from the third year on.

**Color:** The distinctive white head and tail mark an adult—a sexually mature bird that is at least 4 to 5 years old. Younger birds vary from solid dark brown to mottled brown and white plumage. Males and females are colored alike.

**Range:** Formerly bald eagles nested throughout North America. While they now breed mainly in Alaska, Florida and Canada and adjacent states, Missouri has more than 60 active nests. Bald eagles winter at scattered locations throughout the continent—including Missouri, which continues to be one of the leading states in wintering eagles.



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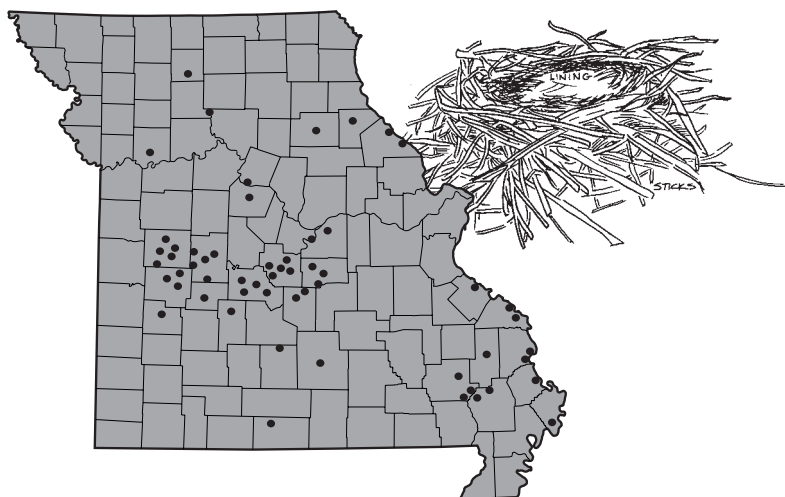
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[www.missouriconservation.org](http://www.missouriconservation.org)

## What Can You Do to Protect Bald Eagles?

1. Learn more about eagles by reading books, attending events like the Conservation Department’s “Eagle Days,” and watching eagles in the wild.
2. Help dispel the myths that lead uninformed people to harm eagles.
3. Stay away from nests.
4. Report suspected nests or adult bald eagles seen during the summer in Missouri to your local conservation agent.
5. Report violation to the Conservation Department or U.S. Fish and Wildlife Service agents.
6. Support organizations that acquire and protect eagle habitats.

## Locations of Eagle Nests



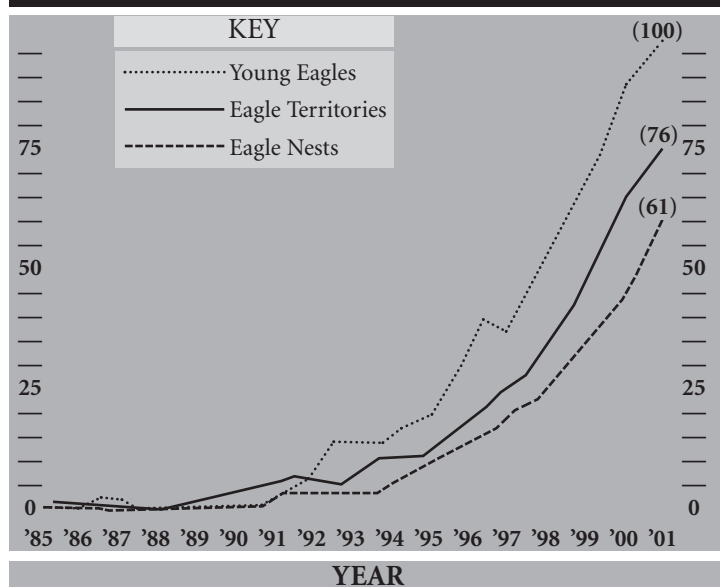
### Report Eagle Nests

To help us locate nests, please report any adult eagle you see in Missouri from May to August to your local conservation agent.

### Management Efforts since Restoring Nesting Bald Eagles in the 1980s

- Surveying and monitoring eagle populations until their numbers became stable.
- Saving existing nest trees from development and bank erosion.
- Leaving buffer zones around nest trees.
- Establishing trees along streams and reservoirs.

## BALD EAGLE NESTING SUCCESS



## Restoring Eagle Nesting in Missouri

Nesting bald eagles were common in Missouri in the early 1800s. By 1890, they were nearly eliminated as nesters. Before the cypress forests were cut and the swamps drained, the main concentration of nesting bald eagles was in the cypress swamps of the Bootheel. This habitat loss, along with hunting and persecution in the late 1800s, is what initially decimated Missouri bald eagle population. Missouri's eagles were already gone by the mid-1900s when DDT was impacting hatching success in other parts of the country.

From 1981 to 1990, the Missouri Department of Conservation, in cooperation with the U.S. Fish and Wildlife Services and the Dickerson Park Zoo of Springfield, released 74 young bald eagles in Missouri to re-establish them as nesters.

Eagles 6 to 7 weeks old were obtained from captive breeding facilities or healthy wild populations and released each summer from artificial nests into two areas with good nesting habitat: Mingo National Wildlife Refuge in southeast Missouri and Schell-Osage Conservation Area north of El Dorado Springs.

The young eagles imprinted on these regions where they took their first flights, and now some have returned to Missouri to breed as adults. This program, plus the eagle's tendency to naturally return to its former nesting range, has enabled eagles to once again nest in Missouri.

Sycamore trees are the most common bald eagle nest trees in Missouri, followed by cottonwood and bald cypress. The construction of large reservoirs such as Truman Lake, Lake of the Ozarks and Pomme de Terre Lake has created habitat in parts of the state other than the traditional Bootheel swamp.

Due to the success of this program, there is no longer a need to continue counting their nests. During the last count in 2001, at least 76 territories were located and at least 61 nests produced young. More than 100 young eagles flew from the nests. The main locations were at Truman Lake, however, eagle nests are found throughout the state with nearly one-third of Missouri's counties reporting eagle nests.

## A Winter Home

During the nesting seasons, bald eagles are rather solitary. But during winter migration they become sociable, forming loose flocks in areas where there are remote trees for roosting. Missouri continues to be one of the leading states in wintering eagles. During the 2003 annual winter eagle count, a total of 2,214 eagles were recorded; six of which were golden eagles. Sixty-four percent of the total number of eagles were adults. Most of the eagles were counted near Table Rock Lake, the Mississippi River and the Osage River. One year, nearly 400 were counted at one time on Squaw Creek National Wildlife Refuge in northwest Missouri, one of the highest concentrations anywhere.

A few bald eagles are usually seen in Missouri by mid-fall and most arrive in December. In some cases, a bird will return to the same location each winter to find food in unfrozen lakes and rivers. In addition to feeding sites, a wintering area usually contains isolated night roosts.

As areas in north Missouri freeze, some eagles will migrate on to open water, scattering to favorable spots as far south as the Gulf Coast. They begin moving back north again in late February. By May, most have returned to their nests along the lakes and streams in the northern pine forests. However, thanks to the nesting restoration program, Missouri's summer population of eagles is around 200.

## The Eagle and the Law

The federal Eagle Protection Act of 1975 makes it a felony to shoot an eagle. Persons convicted of killing a bald or golden eagle are subject to a fine of up to \$5,000, imprisonment up to one year, or both. Subsequent violations may result in fines up to \$10,000, two years in jail or both. It also is illegal to possess and eagle alive or dead, or any eagle parts or products without a permit.

If you have information about an eagle death, you should immediately contact your local conservation agent or the U.S. Fish and Wildlife Service.

Eagle killings can be reported in confidence by calling Operation Game Thief at 1-800-392-1111.

### Winter Eagle Counts

Biologists estimate that Missouri's summer eagle population is around 200, but in winter the population grows more than 10 fold. Below are the most recent numbers from the monitoring project. The 1999-00 count was down slightly because warmer weather may not have forced as many birds this far south.



2001-02	2,684 eagles
2000-01	2,866 eagles
1999-00	1,970 eagles
1998-99	2,373 eagles
1997-98	2,009 eagles
1996-97	2,529 eagles
1995-96	2,632 eagles
1994-95	2,413 eagles
1993-94	2,054 eagles
1992-93	2,394 eagles

### Winter Eagle Viewing Hot Spots

From late December through early February, watch for eagles perched in large trees along the water's edge at the following locations. View early in the morning to see the eagles flying and fishing.

- Eagle Bluffs Conservation Area, off Route K, southwest of Columbia
- Lake of the Ozarks, Bagnell Dam Access, east of Bagnell
- Lock & Dam 24 in Clarksville
- Lock & Dam 25, east of Winfield
- Mingo National Wildlife Refuge, northwest of Puxico
- Riverlands Environmental Demonstration Area, east of West Alton
- Schell-Osage Conservation Area, north of El Dorado Springs
- Squaw Creek National Wildlife Refuge, south of Mound City
- Swan Lake National Wildlife Refuge, south of Summer
- Table Rock Lake, southwest of Branson
- Truman Reservoir, west of Warsaw

## The Future

Today, the bald eagle's future is much brighter. Restrictions on the use of agricultural pesticides, especially the banning of DDT in 1972, are thought to be responsible for the growing numbers of eagles in the United States. In the early 1970s, bald eagles produced less than one chick per active nest, and today Missouri's average is 1.8 to 2.0.

Also, the public has become more aware of the values of eagles, and strict penalties for eagle killers seem to have lessened eagle persecution. No longer do we hear about people like the New Madrid trapper who in 1907 boasted of killing 487 eagles in 37 years. Indiscriminate shootings still do take place. And, nearly every winter, dead or wounded eagles are found in Missouri.

